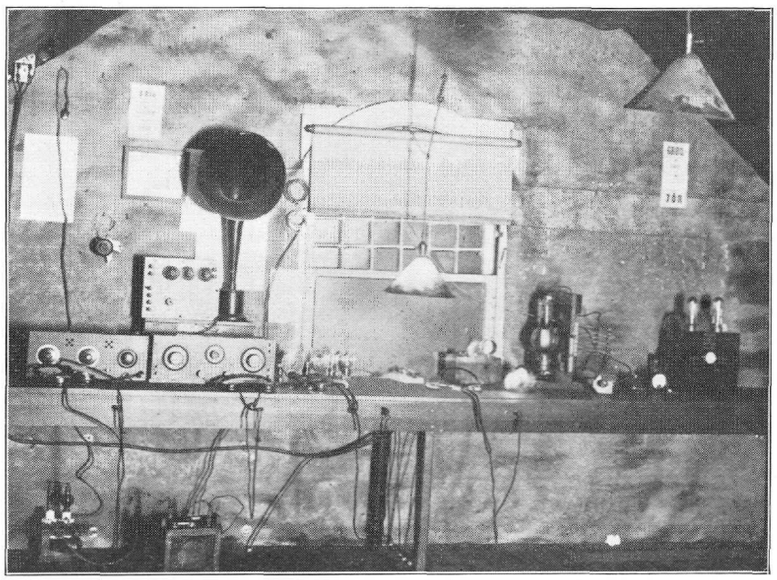
THE OHIO STATE RADIO CLUB

By EDWARD S. HECK, '29

ABOUT the middle of last year a group of students decided that Ohio State needed a radio club. The primary reason for the organization was interest in amateur radio. After much saying of words and smoking of pipes, a constitution was drawn up and the Radio Club started.

The boys rented the second floor of a brick garage, north of the campus on Neil Avenue. A transmitting antenna was strung to a near-by telephone pole, and a receiving antenna run at right angles to it. The first transmitter was a 50-watt CW set working on 40 meters. An old sync motor was fitted with a rectifier disc and brushes, to supply the D.C. for the ransmitter. A "bread-board" receiver was used to cover the amateur wave lengths.

The outfit gave fairly good results and communication was carried on with amateurs in every part of the United States. However, the receiver had a tendency to go dead in the middle of an interesting test. The brushes on the sync rectifier were continually getting out of adjustment, and the transmitting note was consistently reported as "rotten." The difficulties were ironed out gradually and the outfit has been improved ever since.



Station 8LT, Owned by The Ohio State Radio Club

The present set is shown in the cut of the operating table. The transmitter works on 39 meters, driving a Hertz antenna at its first harmonic. The amateur receiver covers the 40 and 20 meter amateur wave bands.

The main transmitter is just to the right of the table center. A UV-/A204 Radio Corporation tube is used in a Hartley oscillator circuit. All unnecessary apparatus was eliminated and the transmitter designed for rugged simplicity.

The Hertz antenna is supported by two 70-foot masts. These masts are made of galvanized spouting pipe. A 70-foot mast made of eave spouting drain pipe seems almost an impossibility, but the material is rigid and light. It seems better adapted to the purpose than anything else.

The power is supplied from the city mains. The voltage is stepped up and the current passed through a 64-jar chemical rectifier. The usual load from the tube is 500 mil-amps with the potential at 1,600 volts. The plate current is filtered by a brute force choke and condenser filter. Reports on the note vary from "D.C." to "good RAC."

A 100-watt telephone set is being installed to work the 200 meter amateur band. This transmitting panel is located to the right of the main transmitter. The telephone set will be used with a separate antenna and rectifier.

The receiving outfits are located on the left of the operating table. First is the 20-40 meter receiver. This is a Schnell type receiver used with a two-step amplifier. The next set is a Grebe regenerative set to cover the high amateur wave lengths. On the extreme left is a Browning-Drake broadcast receiver.

The Western Electric power amplifier and loud speaker is seen in back of the regenerative set. The speaker and amplifier may be used in connection with any of the receiving outfits. This amplifier and the tubes in the receiving sets are run from storage A and B batteries.

The results from this outfit have been all that could be wanted. Stations in Australia are worked regularly and report consistently strong signals. Reception has been reported from most of the European countries. Lately it was learned that the club's call, 8LT, was heard in Cape Town, South Africa.

The Radio Club makes it possible for the student to keep in touch with amateur radio while in school. The club handles around fifty A. R. R. L. messages a month, and lately has affiliated with this national organization of amateurs. However, radio experimentation rather than message handling is the chief object of the club.

Most of the members are former amateur or commercial operators. The officers are: Gene Oppy, president; Ed. Anderson, secretary, and John Byrne, treasurer. The members are nearly all enrolled in the Electrical Engineering or Electrical Physics departments.

YOUNG MEN HAVE IDEAS

Sir Isaac Newton formulated his two greatest contributions to science, the law of gravitation and the discovery that white light was made up of various rays, before he was twenty-five years old. At the age of forty-five he wrote his great book, the "Principia."